To the Chairman and Members of the

BLYTH URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the honour to submit to you my first ANNUAL REPORT for the Year ending December 31st, 1913.

Your district situated on the East Coast of Northumberland, is bounded on the north by the River Blyth, which separates it from Bedlingtonshire:—on the East by the North Sea:—on the South and West it adjoins the Seaton Delaval, Cramlington and Bedlington Urban Sanitary Authorities, and is separated from the former by Meggie's Burn, and from the latter by the Horton Burn and Dene.

The general surface of the district is flat, the highest point above sea level being 168 feet, and thereby necessitating great care in the construction and provision of sewers, and their subsequent ventilation; but, emptying as they do into tidal waters, they are accordingly tide-locked twice in every twenty-four hours, and as a result, sewer gas is very apt to find its way into the houses, unless the sewers are properly ventilated and well looked after, and this I have satisfied myself them to be, whenever the opportunity arises.

The sub-soil of the district is mainly of a clayey nature, and thereby retains a large percentage of the moisture that may fall, and, although our rainfall is comparatively speaking small, yet, with its close proximity to the sea, and the absence of high hills in our immediate neighbourhood, the soil retains its moisture for a considerable time, giving rise to a "mist or ground-fog," which is not beneficial to those of a rheumatic disposition.

The climate on the whole is bracing:—our prevailing wind being from the West, and although we have frequent storms from the North and East, which are very trying to those suffering from chest affections;—with that exception there are no climatic conditions which give rise to any particular disease in the district.

Drainage of the Area:—As far as the surface drainage is concerned, the district is drained mainly by the tributaries of the River Blyth known as Cowpen Burn and Horton Burn on the North and West, and by the Link House Burn and Meggie's Burn on the South, these latter deliver direct into the North Sea.

The principal Industries of the district are (1) Coal-mining; (2) Ship-building and Repairing.



Blyth, being situated practically in the centre of the Northumberland Coal-field, is the natural outlet for the shipment of coal from that area. During the year 1913, four and three-quarter million tons of coal were shipped from the Port of Blyth, thereby constituting a record for the Port, and ranking as one of the leading coal-shipping ports in the country. With the further development of the harbour, and the increased facilities in course of construction by the Harbour Commissioners for the handling of coal, we may confidently expect in a few years that Blyth will continue to rank as one of the principal coal-shipping ports in the United Kingdom.

Ship-building and Repairing is carried on by the Blyth Ship-building Company, Ltd., and give employment to some fifteen hundred men and boys. The Company possess a well-equipped yard for new work, as well as five dry docks for repair work; their record for the past year for new and repair work, being one of the best in the annals of the firm.

A third industry was commenced some four years ago, viz.:—The Port of Blyth Fishing Co., Ltd., and gave employment to a large number of men, unfortunately in the beginning of the year, it was compelled to close down. However, with the splendid facilities offered by the Harbour Commissioners for the transhipment and rapid despatch of fish, it is confidently expected that in the near future, the industry will be revived.

The Herring Season of 1913, was the most successful in the annals of the trade in Blyth, upwards of 1000 hands being employed, but these people, being of a migratory population, and although doing good to the trade of the town, have no influence on the vital statistics of the area.

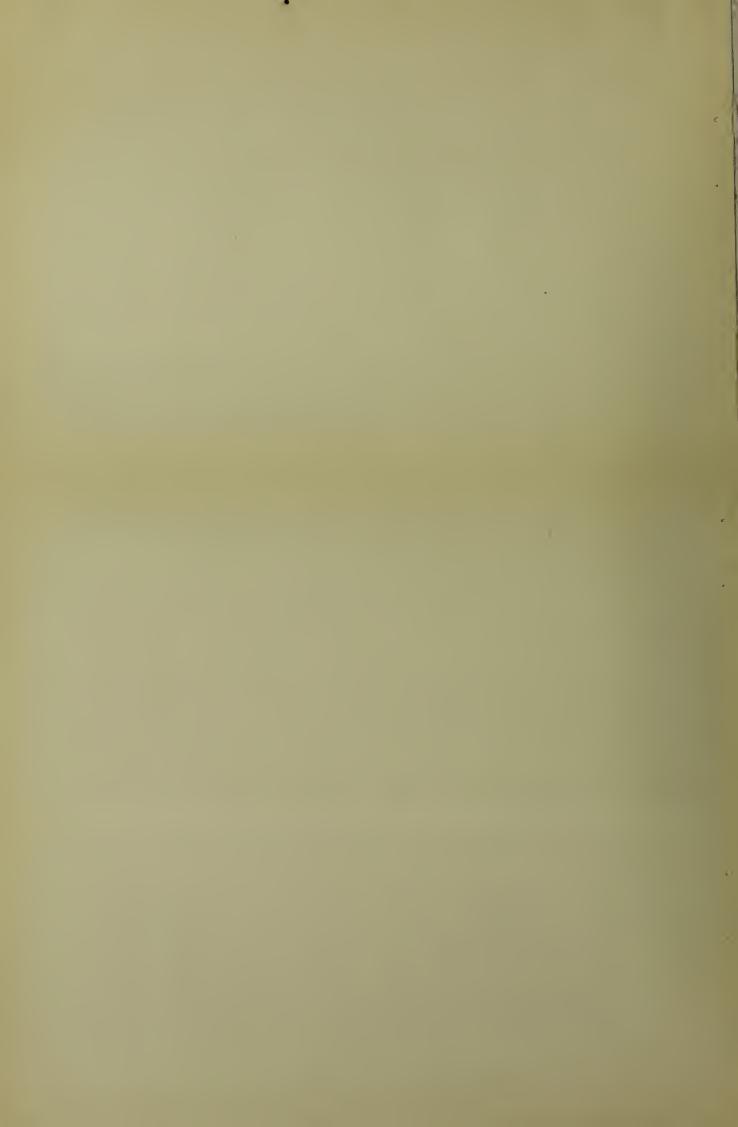
The character and habits of the inhabitants of the district are in the main satisfactory: with all his faults, the Northumbrian Miner is cleanly in his habits, both of his person and home, and especially with regard to his bath, and although none of the miners' houses are equipped with bathrooms, he uses his "tub" daily and systematically, and will compare most favourably with any other class of workmen with whom I have come in contact.

The other Industries of the district have a class of men quite up to the average of the British working man.

Infectious Diseases:—during the year 527 cases of Infectious Diseases were notified as having occurred in your area, viz.:—

Scarlet Fever			350
Typhoid Fever	•••	•••	22
Diphtheria			34
Erysipelas	•••		43
Phthisis Pulmonalis			48
Tuberculosis (other organs)			30
,			
			527

Deducting 78 cases of Tubercular Disease from the above total it leaves 449 cases of the first four mentioned.



Scarlet Fever:—the cases were distributed as follows:

North Ward				40
South Ward				9
East Ward				107
West Ward				158
New Delaval	Ward			36
		Total	-	350
January				28
February				17
March				33
April				13
May				23
June				$\overline{25}$
July				40
August				39
September				57
October				37
November				26
December				12
		Total		350

The disease as seen from the above tables was endemic throughout the year, but during the months of July, August, September and October it became very prevalent, and more so in the East and West Wards, especially the latter. During that period the disease was prevalen all over the country, so that your area was not the only district attacked with it, and taking into consideration the difficulties that the inhabitants of your area have to contend with in regard to the complete isolation of the patient, we may congratulate ourselves that the disease did not become more epidemic than it did.

In connection with infectious disease, it is my opinion, that at times children are sent to school, when suffering from a mild attack of some infectious disease, with the result that other children are infected, and thus cases are multiplied.

I would therefore urge parents to seek medical advice on the slightest appearance of a rash on their children, although the rash may disappear after a few hours, yet it is quite possible, that the child has a mild attack of Scarletina, or some other Zymotic disease, such children should be excluded from school until certified free from disease by the medical attendant.

Thirty-eight patients were removed to the Isolation Hospital, and the benefits to be derived by their removal there, were seen by the fact, that when they were discharged cured, and returned to their homes, no second case occurred in the house. I am therefore convinced that only by complete isolation in a hospital can the disease be successfully handled.

(In the American and Canadian cities I visited some 4 years ago,—The Sanitary Authorities there, nail a red card on the door of each infected house, warning the inhabitants of the dangers of visiting the house, and the penalties incurred if this rule is transgressed. I would recommend this mode of procedure to your Authority as well worthy of a trial).



The disease was responsible for 9 deaths, and they were distributed as follows:—

6 cases in the East Ward. 3 cases in the West Ward.

Enteric or Typhoid Fever:—during the year 22 cases were reported as occurring in your area, viz.

North Ward				2
South Ward	•••			3
East Ward			•••	4
West Ward				4
New Delaval Ward			•••	9
		Total		22

The cases occurred during the following months:-

January		•••	1
February			1
April			2
May	•••	•••	2
September			1
October		• • •	7
November			6
December		•••	2
			_
	J	Cotal	22

No definite cause could be accounted for the disease, some of the cases probably being due to a sanitary defect, which was very promptly remedied, in others it was difficult to find the cause, but in no case could I trace any direct communication with the others.

Four cases were removed to the Isolation Hospital. Seven cases proved fatal, and the deaths were distributed as follows:—

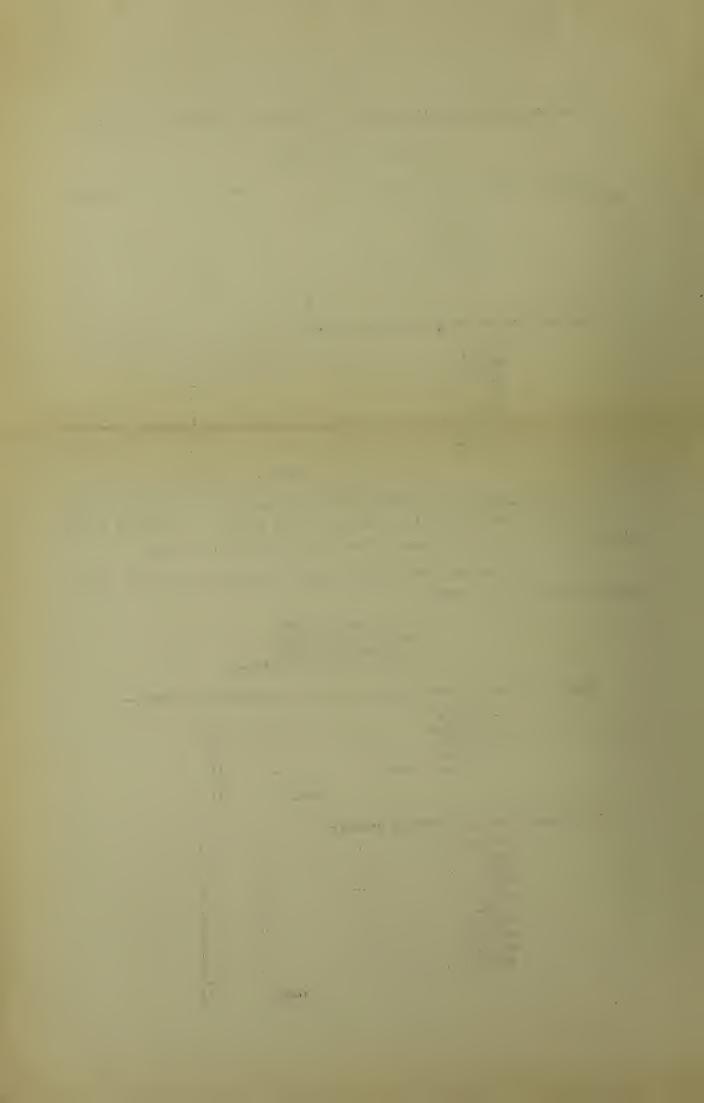
```
2 cases in the East Ward.
1 case in the West Ward.
1 case in the South Ward.
3 cases in the New Delayal Ward.
```

Diphtheria (including Membranous Croup) 34 cases were notified as follows:-

North Ward		5
South Ward	•••	2
East Ward		8
West Ward	•••	8
New Delaval Ward		11
		_
	Total	34

They occurred during the following months:-

February			•••	3
	•••	•••		4
April		•••	•••	3
June				1
July			•••	2
August		•••	•••	4
Septembe		•••	•••	6
October		•••	•••	4
Novembe		•••	•••	1
Decembe	r	•••	•••	6
			M-4-1	24
			Total	34



This disease being distributed over the area I was unable to find any common cause, neither the milk nor the water being at fault, nor were the cases confined to any particular school or district.

Two cases (only) were removed to the Hospital, and this result is due in a great measure to the use of Antitoxin which is a specific for the disease, and it has greatly robbed it of its terrors. Although it would greatly increase the beneficial efforts put forth, if all the cases were completely isolated and not allowed to mingle with the healthy until quite free from infection. Antitoxin was supplied free to the medical practitioners when asked for.

("In connection with this, might I suggest to the Medical Practitioners in the district that they should take advantage of the system established by the County Council of Northumberland by which the College of Medicine through its bacteriological department examines free of charge specimens from cases of Diphtheria, Typhoid Fever and Tuberculosis).

Four cases proved fatal, and were distributed as follows:-

case in the South Ward.
 case in the East Ward.
 case in the West Ward.
 case in the New Delaval Ward.

Erysipelas: -43 cases were notified and occurred as follows:-

North	Ward			9
South	Ward			0
East V	Vard			19
West V	Ward			8
New D	elaval Ward			7
			Total	43
January				1
35 3				5
April				2
May				5
June				7
July	•••	•••	•••	5
	•••	•••	•••	2
Septembe	er			6
October				3
Novembe	r			4
December	r			3
			Total	43

One case from the North Ward was removed to the Hospital.

Measles:—This disease was prevalent all over the area during the first 6 months of the year, and with its pneumonic complications was responsible for 15 deaths. This is a disease which is looked upon by mothers as one which all children "ought to take" during their childhood, and is therefore looked upon as a trifling ailment with the result that in many cases no medical advice is sought until complications set in, and in many cases treatment is of no avail as will be seen from the statistical tables. Measles is responsible for 60 per cent of all the deaths due to Infectious Disease. I would therefore strongly urge all parents to seek Medical Advice on the first symptom of the disease and keep the child isolated until all danger is past.



The deaths were distributed as follows:-

```
2 cases in the North Ward.
7 , East Ward.
2 , West Ward.
4 , New Delaval Ward.
```

I had no occasion to close any of the Schools, but all children from infected houses were excluded from attending the Infant Schools.

Whooping Cough:—was prevalent during the earlier months of the year all over the district and especially in the Bebside Area of the West Ward, and although the School averages were lowered, especially in the Infant Department I did not deem it necessary to close the School.

The Schools were regularly and systematically disinfected with a strong solution of Formalin, and all children suffering from this disease were excluded from attending school.

The disease with its pneumonic complications was responsible for 10 deaths, distributed as follows:—

```
1 case in the North Ward.
1 " " East Ward.
4 cases in the West Ward.
4 " " New Delayal Ward.
```

Diarrhœa:—was responsible for 25 deaths as against 13 deaths in 1912 and 17 deaths in 1910. This is partly accounted for in the very dry weather experienced during the summer months. The disease was very prevalent during the months of August and September, the fatalities being mainly in the latter month. 14 of the deaths were in children under 1 year. Early in July with your permission, I had printed and distributed throughout the area, handbills pointing out to the inhabitants the dangers of summer diarrhœa, and the preventative means to be taken relative to the preservation of the milk and the covering of all foodstuffs. With the dry weather experienced during the summer extra precautions were taken regarding the flushing of the drains and sewers, and the distribution of disinfectants. As time goes on I hope the inhabitants of your area will realise the dangers of this disease and more readily to adopt the preventative means and probably the advice and instructions given by the nurses of the District Nursing Association will be more helpful in the future and bear good fruit.

Tuberculosis:—during the year 78 cases were notified, viz.:—

```
(a) PHTHISIS PULMONALIS—48 cases, distributed as follows:—
             North Ward
                                                        4
             South Ward
                                                        3
                             . . .
             East Ward
                                                       26
                                            ...
             West Ward
                                                        8
                                             ...
             New Delaval Ward
                                                        7
                                             . . .
                                      Total ...
                                                       48
```

(b) TUBERCULOSIS (other forms)—30 cases distributed as follows:—

North Ward ... 1

East Ward ... 15

 West Ward
 ...
 9

 New Delaval Ward
 ...
 5

Total ... 30



The cases occurred as follows:-

occurred as .						_
Phthis	is Pulm	onalis.		Tubero	ulosis (other form	ns)
January	,	• •/	5	•••	0	
February			3	•••	3	
March		•••	7		10	
April			5	•••	4	
May	•••		9	•••	3	
June	••.	•••	1	•••	1	
July	•••		9	•••	3	
August			3	••	1	
September			2	•••	0	
October		•••	0	•••	$\frac{2}{2}$	
November	•••		$\frac{2}{2}$	•••	2	
December	•••	•••	2	•••	1	
		m ()	40	Tot	al 30	
		Total	48	100	al JU	

27 deaths from Phthisis Pulmonalis and 21 deaths from Tuberculosis occurred and were distributed as follows.—

Phthi	sis Pulmo	nalis.		Tub	erculosis.
North Ward			5		3
South Ward	•••		4		1
East Ward			10		10
West Ward	•••		5		5
New Delaval	Word	•••	3	•••	2
New Delavai	ward	•••	· ·	•••	_
		Total	27	Total	21

Of 78 cases of Tubercular Disease notified during the year 48 cases had a fatal termination, that is 56 per cent.

This is a disease, which owing either to the difficulty of diagnosis (which need not be, bearing in view the bacteriological examination of the Sputum arranged by the County Council at the College of Medicine, Newcastle-on-Tyne), or a reluctance on the part of the Medical Attendant is, in the majority of cases only notified at an advanced stage of the disease when treatment is of no avail, but with the advent of the National Health Insurance Act, and the benefit to be derived from Sanitorium and domiciliary treatment, we may hope for a better state of things, especially as it is now an accomplished fact that the Northumberland County Council have undertaken to treat all sufferers from this disease whether insured or non-insured.

Death Rate—487 deaths were registered in the district during 1913, 5 deaths of non-residents occurred in your area, and 32 deaths of residents of the district occurred outside the district. The total number of deaths belonging to the district was therefore 514. This is the largest number of deaths which have been registered in the district during any one year. The Death Rate is 16:55 which is the highest for the past four years.

Infant Mortality—111 deaths of children under one year occurred during the year giving a death rate of 113·61 per 1000 births registered which is the lowest on record for the district, whilst we have every reason to congratulate ourselves on this. The death rate amongst young children is still too high. This might arise from various causes, such as insufficient knowledge in young married people of the dangers of pregnancy in the prenatal stage and therefore militating against the healthy condition of their offspring, and the exposing of young infants in the antinatal stage to the vitiated atmosphere of places of amusements, and thereby rendering them more susceptible to chest complaints, which are so often fatal in young children.



Zymotic Death Rate—under this heading I include the Eruptive Fevers, Measles, Whooping Cough, Influenza and Epidemic Diarrhœa. 72 deaths from these diseases occurred in the district giving a death rate of 2·24. The causes of death were—Typhoid Fever 7; Scarlet Fever 9; Diphtheria 4: Measles 15; Whooping Cough 10; Influenza 2; Epidemic Diarrhœa 25.

Birth Rate—977 births were registered in the district, and 4 births were transferred to this district making the net number 981; of these 36 were illegitimate. The birth rate for the year is 32:15 which is practically the same as it has been during the past four years.

Water Supply:—The East and West Wards of your district have now got a good water supply. Your Authority having taken over the disused Hepscott Colliery, a complete set of pumping machinery has been installed; a new reservoir made, and with the bacteriological and chemical analysis of a series of samples of the water proving satisfactory for domestic use (the results of the examinations by Prof. Hutchens and Mr. Pattinson I append), the water was turned on and up to the present the supply has proved most satisfactory both as to quality and quantity.

The North and South Wards of your area continue to be supplied by the Newcastle and Gateshead Water Co., Ltd.

Common Lodging Houses:—of which there are four, were regularly visited during the year and everything found in order and in conformity with the Bye-Laws.

Slaughter Houses:—19 Slaughter Houses are registered and in regular use in your area. These were visited and inspected at regular periods, and were found as regards whitewashing and cleanliness to conform with your bye-laws, but it would facilitate matters and be more sanitary if they were all under one roof and your own property.

Bakehouses:—These have been carefully attended to, and when necessary to limewash and ventilate, notices were served on the owners.

Sewers and Drains:—are sufficient and efficient, and proper provision is made for ventilating and flushing.

Scavenging:—This is done entirely by your own staff and as the district is generally covered in twelve to fourteen days, it is rare that any complaint is received, and with the increasing number of water-closets provided especially in the town district, this is a material help to the scavenging, and now that your Council has got an adequate water supply, and the whole of the district being sewered, there is no reason, why the whole of the town area should not be changed from the privy to the water-carriage system, and I hope that the day is not far distant when that will be an accomplished fact. During the year 18 conversions have been made under Section 39 of the Public Health Amendment Act, 1907, in Soulsby's Yard and Clive Street, whilst 5 new water closets have been erected in Silver Street.

The disposal of the refuse should be considered: at present, part of it is being emptied into two disused brick yards in the South and West Wards; whilst the remainder is deposited on the fields of farmers in the district and is immediately ploughed in. This, to my mind, is derogatory to the health of the district and conducive to the annual plague of flies and the resultant pollution of food, &c., which in many cases is the origin and spread of various diseases such as Epidemic Diarrhæa, Typhoid Fever and other ailments. The most practical method of disposing of the town's refuse is conveying it to Sea and this method is well worthy of your consideration, the other alternative is to erect a Refuse Destructor, or in the providing of more tips in the district, the latter of which is always a nuisance to some one.

A Steam Disinfector is also required for the proper and efficient disinfecting of bulky articles, and it could be worked in conjunction with the destructor.

Sale of Food and Drugs Act:—No action under this Act was taken during the year.

Dairies, Cowsheds and Milkshops:—There are 19 Cowsheds registered in your area in these are kept 200 cows. They are kept in a good state of cleanliness, the limewashing and general removal of the manure being regularly attended to. The Dairies and Milkshops, where the milk sold is imported from farms outside your area are also kept up to a high standard, every care being observed to ensure the milk being delivered in a pure state.



Schools—during the year I considered it necessary to close the Infant School at Bebside one week prior to the Midsummer Holidays for an outbreak of Scarlet Fever. I made a personal visit to practically every infected house in that district, and ably backed up by your officials we succeeded in stamping out the disease in three or four months. My method of dealing with notifiable infectious disease is to at once inform the Sanitary Inspector together with the School Attendance Officer who assists in excluding the children from the infected house from School, and does not readmit until he receives information that the infected house has been disinfected and is free from infection.

The main roadways in your area are maintained in an excellent condition, but the roads in the colliery districts are during the winter months in a deplorable condition, and some means of improving these roads should receive the early consideration of the Council.

The most urgent needs of the district are :-

- (1) Disposal of Town's Refuse.
- (2) General adoption of Water Carriage System together with the abolition of Ashpits.
- (3) Steam Disinfector.
- (4) Improvements in the roadways in the Colliery districts.

The usual tables are appended with this report.

I have to express my indebtedness to Mr. Grieves, Surveyor, and Mr. Fawcett, Sanitary Inspector, for their very able assistance. Their reports shew the large amount of work which has been done in their departments during the year.

Copies of this Report will be sent to the Local Government Board, the Home Office, and the Northumberland County Council.

I have, Gentlemen, the honour to be,

Your obedient servant,

JAMES MORTON MACLACHLAN, M.B., C.M.,

Medical Officer of Health.



SUMMARY OF WORK done in the SURVEYOR'S DEPARTMENT during the Year ended March 31st, 1914.

Streets and Roads. The following Private Street Works were carried out, viz.:—
The making of Wharton Street, Newsham, Princess Louise Road from Princess Gardens to the Subway, Dalmatia Terrace, Bohemia Terrace, Columbia Terrace and Arcadia Terrace, and the Back Streets in connection therewith; Rosemary Terrace (front and back), New Post Office Street, Back Bridge Street, Back Marine Terrace (portion of), Kitty Brewster and Bell's Row.

The Public Street and Road Work included the tar-macadamizing of Freehold Street, portion of Bowes Street, and many Back Streets within the District. The Links Road was re-surfaced with tar macadam, and the footpath kerbed and asphalted.

A considerable improvement was effected by the widening of the main road at the Links House. The road from Links House to South Newshain, and Hathery Lane were also re-surfaced.

Waterworks. In the EAST AND WEST Wards 130 lineal yards of four-inch, and 290 lineal yards of three-inch Water Mains were laid, including the fixing of one four-inch and 8 three-inch Sluice Valves and 25 Fire Hydrants. 27 services and stop-cocks were laid for the supply of water to new premises.

In the NORTH AND SOUTH Wards 60 lineal yards of six-inch, 6 lineal yards of four-inch, and 105 lineal yards of three-inch Water Mains were laid, including the fixing of one six-inch, 2 four-inch, and 4 three-inch Sluice Valves, and 4 Fire Hydrants. 42 services and stop-cocks were laid in.

NEW DELAVAL Ward. 50 lineal yards of three-inch Water Mains were laid, and one three-inch Sluice Valve and one Fire Hydrant fixed. 3 service pipes and stop-cocks were laid in.

Sewerage. The twenty-four-inch diameter South Blyth Storm-water Sewer was extended for a length of 140 yards, and 4 new manholes built. 30 lineal yards of nine-inch Sewers were laid in Alexandra Crescent and one new manhole built.

Lighting. Additional Street Lamps were erected as follows:—North and South Wards, 6; East and West Wards, 16; and New Delaval Ward 12; bringing the total number of Public Street Lamps within the district to 987—969 being of 80 candle power and 18 of 300 c.p.

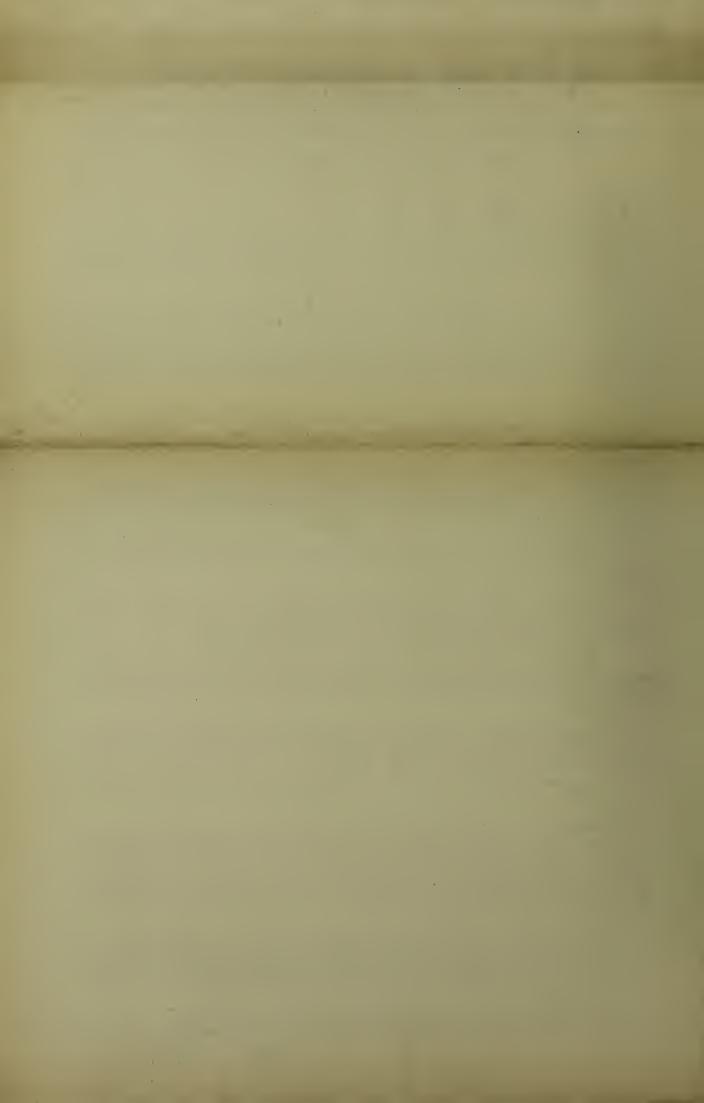
Pleasure Grounds. At Ridley Park 650 super. yards of footpath were top-coated with asphalte, and 1100 super. yards were tar-sprayed. The stone pitching round the Lake was repaired, and lockers fixed in the Bowls House.

Newsham Recreation Ground was acquired, and enclosed with a creosoted redwood military fence.

Cemeteries. In dealing with the additional acres of land acquired for the extension of Cowpen Cemetery, it has been necessary to divert the water-course which ran through the centre of it. This has involved the construction of a Culvert thirty-six inches in diameter and 290 yards in length, also the construction of 340 lineal yards of six-inch Sewer and 11 manholes. The ground has been under-drained and levelled up. 970 super. yards of footpath were asphalted in the older portion of the Cemetery. Plans and estimates have been prepared for the extension of Blyth Cemetery.

Building Plans. 45 Building Plans were submitted to, and approved of, by the Council, viz.:—One for laying out new streets, 22 for the erection of new dwelling houses (representing 87 houses in all), 12 for alterations and additions to dwelling houses, and 10 for miscellaneous buildings, including a Primitive Methodist Church, a Factory, Stores, Workshops, Stables, &c.

The number of dwelling houses erected and certified as fit for habitation was, in the North and South Wards, 29; East and West Wards, 15; and New Delaval Ward, 2. Total 46.



INSPECTOR OF NUISANCES' ANNUAL REPORT.

To the Chairman, Vice-Chairman and Members.

Gentlemen,

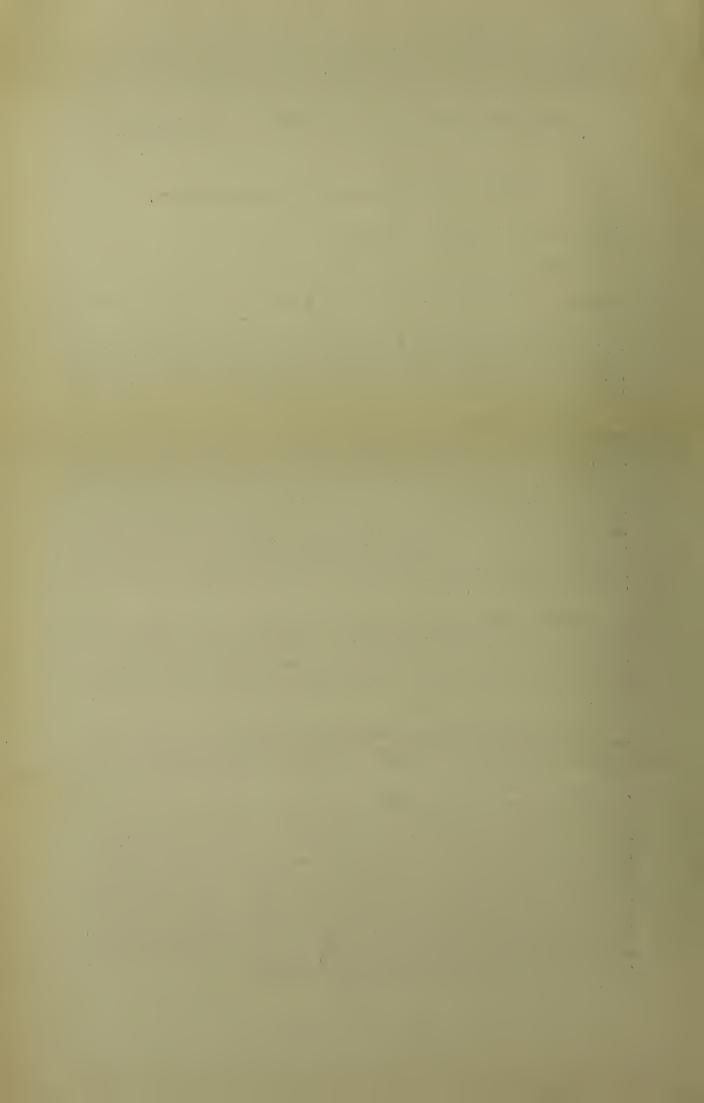
I beg to submit to you my Annual Report for the year ending December 31st, 1913.

Scavenging of House Refuse.—The work of this department has been satisfactorily carried out. The ashpits throughout your area have been cleansed 28 times during the year, which gives an average of 13 days between visits. During the year 30,863 loads have been dealt with; compared with last year this is an increase of 704 loads, and works out approximately at one load per head per annum of the total population.

Disposal of Refuse.—One-fourth of the total refuse dealt with has been deposited at the Blyth Brickworks Clay Quarry, at a point about 350 yards distant from the nearest dwelling-house, 3,500 loads have been tipped at the disused Model Brickworks, Cowpen, and the remainder has been put upon agricultural land at the several farms within the district, and every care has been observed to prevent any nuisance being caused at any of the deposits. The blown paper has been regularly gathered and burned, and the surface of the refuse is, as far as possible, being covered with road sweepings or other suitable material. The ashes that have been deposited on the land were ploughed in as soon as possible, thus effectually preventing any nuisance occurring so far as land tips are concerned. Considerable difficulty continues to be experienced in procuring convenient tips in the outlying parts of the district, particularly in the Bebside parish. The deposits available in the town area are gradually diminishing, and the question of other means of disposal will have to be decided upon in the near future.

Infectious Disease has been prevalent in the district during the whole year. In all, there have been 405 houses affected, including cases of phthisis. A liberal supply of disinfectants, together with instructions to be observed to prevent the spread of the disease, were left at each infected house. Acting on instructions received from the Medical Officer of Health, 45 cases were removed to the Isolation Hospital. 350 houses have been sprayed with a 4 per cent. Formalin Solution or disinfected with Sulphume after the recovery of the patients, or on their removal to hospital.

Conversions from Privies to Water Closets.—There has been a slight increase in the number of conversions from privies to water closets during the year, still the number remains very much below what is required if the district is to be changed from the privy system to that of water carriage, within a reasonable period. In all 18 conversions have taken place. Five of these have been carried out at Soulsby's Yard, Clive Street, Cowpen Quay, under Section 39 of the Public Health Amendment Act, 1907, whereby the Council pays one half of the cost of conversion, and I am pleased to report that the new type of sanitary convenience is very much appreciated by the tenants. I have made regular inspections and have always found them clean and satisfactory in every respect. In addition 5 new water closets have been erected at the owner's cost at Smith's property, Silver Street (inspected under the Housing and Town Planning Act, 1909); these are likewise being kept in a sanitary condition, and are a credit to the occupying tenants. Both of these properties are occupied by tenants of the labouring class, which goes to prove that they appreciate sound, modern sanitary conveniencies when they are provided for them. Now that the Council has got an adequate water supply, and the whole of the district being sewered, there is no reason from a practical standpoint why the whole of the town area should not be changed from the privy to the water carriage system within a reasonable period. The difficulties are, I think, entirely on the financial side of the question.



Dairies, Cow Sheds and Milk Shops.—19 persons are registered as Cowkeepers in your area, the number of cows kept being 200. During the year the cow sheds and premises occupied by purveyors of milk have been regularly inspected, and the necessary limewashing and cleansing have been carried out in compliance with the Cow Sheds and Dairies Regulations.

New Houses Erected.—189 new dwelling houses have been added to the register during the past year. This compares favourably with the number registered during the previous 12 months, when 167 new houses were added. In the new houses built the water carriage system has been adopted in every instance. I have applied the smoke test to all the drains, in connection with which an inspection chamber fitted with an intercepting trap has been built. The ground surface under the floor has been covered with a layer of concrete. The whole of the houses have been erected by local builders, and they are quite up to the usual high standard of dwelling house that has been erected in your area during recent years. Owing to the failure of the fishing industry which was established three years ago, and the consequent exodus of the employees of the Company, there was a considerable number of empty houses in the district at the early part of the year, particularly at Crofton, where 50 houses had been built specially for the accommodation of the fishermen and their families. These houses are again all occupied by a good class of tenant. This shows that while there is not a serious dearth of houses in the district, there is a considerable demand for houses of a type suitable to the needs of an industrial population. At the end of the year there were 6673 dwelling houses in the district, 5789 of which are under £16 gross rental, and 893 over that amount.

Factories and Workshops.—There are 147 Factories and Workshops on the Factories and Workshops register. The names and number of the several trades are as follows:—

Bakehouses				12
Dressmakers, Milliners		•••		13
crs at		•••		10
Joiners, Cabinet Makers a	and Ca	rtwrights	•••	24
Printers, etc				5
				13
Mineral Water Manufact	urers	• • • • • • • • • • • • • • • • • • • •	•••	3
		•••	•••	8
Boot and Shoe Makers a	nd Rep	airers		12
Laundries	•••			2
Painters and Decorators				6
Saddlers				3
Fish Curers		•••	•••	32
Other Trades	• • •		•••	5
				147

The several premises have been frequently inspected, and the following notices have been served during the year:—

To improve Sanitary Conveniences	 	1
To limewash Sanitary Conveniences	 • • •	4
To limewash Bakehouses	 	2
To ventilate Bakehouses	 	1
To cleanse Workshop	 	1

Slaughter Houses.—19 Slaughter Houses are on the register and in regular use in your area. Hitherto some difficulty has been experienced by the several occupiers of Slaughter Houses to procure lime for limewashing purposes. This has now been remedied by the Council storing a quantity of lime for this purpose, and the occupiers of Slaughter Houses will always be able to procure sufficient for their needs on application to the Council's Storekeeper. Extracts from the Bye-Laws with respect to the dates for limewashing, and general cleansing of Slaughter Houses, have been printed, and a copy handed to each occupier. All refuse from Slaughter Houses, after being collected by the occupier, is removed by the Council's staff at regular intervals.



Common Lodging Houses.—There are four registered Common Lodging Houses in the district, which are kept in a satisfactory state of cleanliness. With one exception they are fitted with water-closets. The general scavenging, etc., receives frequent attention. The occupiers, who are mainly migratory, evidently enjoy very good health, as only one case of infectious disease (Erysipelas) has been notified as occurring in the Lodging Houses during the year. This case was removed to Hospital, and the room immediately sprayed with a strong solution of formalin and kept closed for one week before being again occupied.

Fumigating Rooms in Schools.—At the request of the Education Authority the whole of the schools in the district were thoroughly disinfected during the Christmas and Midsummer vacations. A strong solution of formalin was used for spraying; the rooms were also fumigated with sulphume.

Inspection of District.—Housing and Town Planning Act, 1909.—Whilst carrying out my general inspection of the district I have had occasion to serve 83 notices for the abatement of nuisances and improvements to properties.

Under the Housing and Town Planning Act I have inspected and recorded in the register of houses inspected particulars of 69 houses; of these 58 were found to be in fair repair and reasonably fit for habitation. 11 of the houses were found to need repairs, particularly with respect to the sanitary conveniences, outbuildings and yards. The ashpits and privies at these properties were entirely removed, and 5 new water-closets erected. The yards were re-paved with cement concrete, and galvanised iron ash bins provided for dry refuse. One house at Cowpen was entirely re-roofed, had new floors laid, the kitchen range was renewed, and the sanitary conveniences were rebuilt.

During the years 1912 and 1913 the Cowpen Coal Company has improved a considerable number of the cottages provided for their workmen in various parts of the district. The improvement has been effected by building a substantial scullery-kitchen at the back of the several cottages. The new erections have in a number of cases taken the place of temporary sheds which appeared to have been erected by the several householders. Each new kitchen is provided with a fire-place and set-pot, the floors are cement concrete, and they are fairly well lighted. The comfort and convenience of the householders has been very much added to by these additions to the houses. The improvements have been carried out at the following places:—

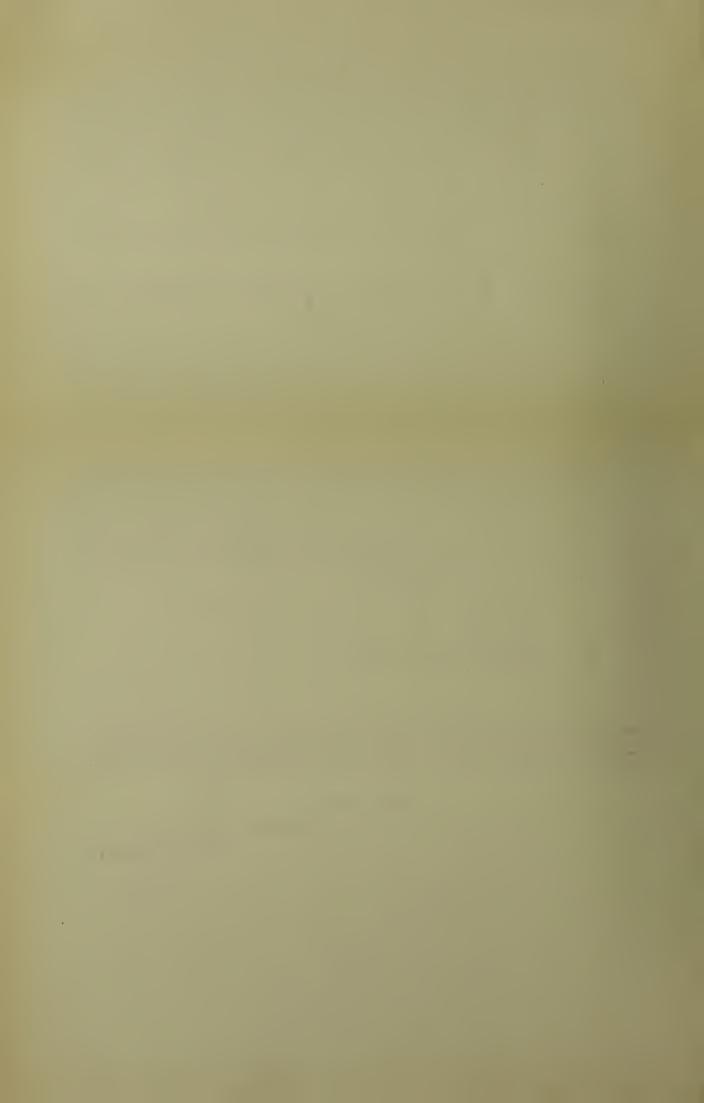
Cowpen Row	•••	•••	30	Cottages.
Station Row, Newsham			2 8	"
Brick Row, "	•••	•••	30	**
Stone Row, "	•••	•••	24	,,
Single Row, South News	sham		28	**
Double Row, " "		•••	34	1)
		-		
			174	

Five Cottages at South Newsham have been altered from 4-roomed Cottages to two Cottages of 2 rooms each. This is to be regretted, as there are always plenty of workmen with large families employed upon collieries that require houses of the former class. The greatest defect in connection with the older type of colliery house is the inadequate bedroom accommodation that is provided for the miner and his family.

I am, Gentlemen,

Your obedient Servant,

JOHN FAWCETT.



The Bacteriological Laboratory,

College of Medicine,

Newcastle-on-Tyne,

24th November, 1913.

DEAR DR. MACLACHLAN,

Herewith I send you the results of the examinations of a series of samples of water taken from Hepscott and Bebside for the purpose of determining the bacterial contents of the two waters, and also for the purpose of comparing the filtered with the unfiltered water.

It would appear that the Hepscott water improved in quality as regards its content of bacteria during the period the samples were taken—24th Sept., 1913, 30th Oct., 1913—and that on the last two occasions no objection whatever could be raised to the quality of the water on that score. The filtered water is not quite so good in comparison.

Yours very truly,

H. J. HUTCHENS.



Public Analysts' Laboratory, 10 Dean Street,

Newcastle-on-Tyne,

December 2nd, 1913.

We hereby certify that we have analysed the undermentioned samples of Water and that we find the following results:—

Samples marked respectively "No. 1" and "No. 2."

		"No. 1."		" No. 2."		
Total solid matters in solution, dried at 21	2° F.	37.800		35.420 grains per §		
Chlorine existing as Chlorides	•••	1.464		1.812	do.	
Ammonia		0.018	••••	0.003	do.	
Albuminoid Ammonia	••••	0.002		0.004	do.	
Nitrogen existing as Nitrates	••	0.010		0.010	do.	
Oxygen absorbed in 15 minutes at 80° F		not de	termi	ined.		
,, ,, 4 hours ,,		0.026	••••	0.021	do.	
Lead and other Poisonous Metals		none.		none.		
Hardness before boiling, Dr. Clark's s	cale					
after boiling 1 hour	•••	not det	ermi	ned.		
Appearance in two-foot tube		opalesc	ent.	Colourles	s and clear.	
Smell when heated to 100° F.	•••	none. none.				
Microscopical examination of Sediment	•••					

This is a hard water, but in regard to the presence of organic impurity it is satisfactory, and is in our opinion suitable for drinking.

The sample taken direct from the pit (No. 1) contains a considerable amount of ammonia; but we attribute this, from our examination of the supply down the pit in 1908, to the reducing action of iron compounds on some of the nitrates originally in the water. The sample still contains a notable amount of hydrated ferric oxide in suspension, but no iron compounds in solution.

The effect of storage and filtration is seen in the diminution of the free ammonia, as well as in the perfect clearness of the No. 2 sample and its complete freedom from suspended iron compounds.

J. & H. S. PATTINSON.

Dr. J. Morton MacLachlan, Medical Officer of Health, Blyth.



The Bacteriological Laboratory,

College of Medicine,

Newcastle-on-Tyne.

Results of the examination of a series of samples of water taken at Hepscott Pit and after filtration at Bebside. 24th September—30th October, 1913.

		HEPSCOT	T PIT.	AFTER FILTRATION AT BEBSIDE.						
	Colon Bacillus	Strapto- cocei.	Bacillus Enteritidis	Total Numbers.		Colon Bacillus	Strapto-	Bacillus Enteritidis	Total Numbers.	
	Test.		Test.	37 о. с.	20 о. с.	Test.	cocei.	Test.	37 о. с.	20 o. c.
24 ix. 13	"Atypical" Organisms in 100 c.c. Negative in 10 c.c.	Nil.	Nii.	3	70 Liquified in two days.	"Atypical" Organisms in 100 c.c. and in 10 c.c.	Nil.	Nil.	One large colony overgrew plate.	50
8 x. 13	100 c.c. "Typical." 10 c.c. Negative,	Nil.	Nil.	One large colony overgrew plate.	20	100 c.c. "Typical." 10 c.c. Nega- tive.	Nil.	Nil.	9	80
22 x. 13	Negative.	Nil.	Nil.	2	20	"Atypical" Organisms in 100 c.c. 10 c.c. Negative.	Nil.	Nil.	3	20
30 x. 13	Negative.	Nil.	Nil.	8	10	100 c.c. "Atypical" Organisms. 10 c.c. Negative.	Nil.	Nil.	5	30

H. J. HUTCHENS.



TABLE IIIa.—Allocation of Zymotic and Tubercular Deaths to Sub-Districts, 1913.

		NOI WA	RTH RD.	SOU WA			ST RD.	WE WA	ST RD.	NE DELA WA	AVAL	
1.	Enteric Fever				1		2		1		3	
2.	Small-pox											
3.	Measles		2			7		2		4		
4.	Scarlet Fever			•••		6		3				
5.	Whooping Cough		1	•••		1		4		4		
6.	Diphtheria and Croup				1		1		1		1	
9.	Phthisis . Tuberculous Meningit		5		4	1			5		3	
11.	Other Tuberculous		•••								ļ	
	Diseases .	. 3		1		10		5		2		
		Under 2 yrs.	2 yrs. and above	Under 2 yrs.	2 yrs. and above.	Under 2 yrs.	2 yrs. and above.	Under 2 yrs.	2 yrs. and above.	Under 2 yrs.	2 yrs. and above.	
19.	Diarrhœa and Enteriti	S		2	1	12	4	5	•••	•••		



Table X.

1		Deaths under I year.	
		Deaths (11ett).	
	1	Births (nett).	
		Population.	
ľ		Deaths under I year,	
۱		Deaths (nett).	
		Births (nett).	-
		Population.	
	4L	Deaths under I year.	ි භ
	/ DELAVAL WARD.	Deaths (nett).	73
	NEW DI	Births (nett).	54
	Z	Popuiation.	2366
	RD.	Deaths under I year,	:
-	WEST WARD	Deaths (nett).	15
ı	WEST	Births (nett).	69
	EAST WARD.	Population.	6084
		Deaths under	2.2
		Deaths (nett).	233
		Births (nett).	523
		Population.	15451
	SOUTH WARD.	Deaths under 1 year.	1
		Deaths (nett).	20
	ОПТН	Births (nett).	7.5
	S	Population.	3418
	NORTH WARD.	Deaths under I year.	5
		Deaths (nett).	54
		Births (nett).	105
		Population.	4432
	Year.		1913



Vital Statistics of Whole District during 1913 & previous Years in

DISTRICT BLYTH URBAN

O THE DISTRICT. At all Ages.	Rate.		13	15.39	17.77	14.01	15.45	14.86	16.01	
GING TO TH	At a	Number.	0	12	423	86 †	00 †	440	466	5 14
THS BELON	Under 1 Year of age.	Rate per	Births.	=	148.3	160-2	140.3	150.9	116.48	113.61
NETT DEA		Number	O O	10	135	153	129	138	118	וו
TRANSFERABLE DEATHS. KI NETT DEATHS BELONGING TO THE DISTRICT	Of Residents	not registered in the	District.	6	6	ઝ	<u>о</u>	83	35	35.
TRANSFERABI	Of Non-	Residents registered in	tile District.	8	01	4	0	အ	6	70
FOTAL DEATHS	THE DISTRICT.		Kate.	7	15.13	17.63	13.69	14.61	14.03	15.16
TOTAL	THE DI		Number.	9	416	494	391	415	440	487
		i e	Kale.	വ	33·11	34.09	32.19	32.17	32.31	32.15
Denmark	DIKTHS.		Number.	4	910	955	916	914	1013	077
		Un- corrected	Number.	က	910	955	919	016	1008	720
	Population	estimated to middle of each year.		2	27477	28011	28545	28405	31351	39066
		YEAR.		-	1908	1909	0161	1911	1912	1019

Nores.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911 some of the corrected rates probably will not be available. The rates should be calculated per 1000 of the estimated gross population. In the district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in columns 5 and 13 may be calculated on a net population, obtained by deducting from the estimated gross population the average number of immates not belonging to the district in such institutions.

On column 6 are to be included the whole of the deaths registered during the year as having actually occured within the district.

In column 12 is to be eincluded the whole of column 6, column 6, corrected by subtraction of the number in column 8 and by addition of the cumber in column 9. Deaths in column 10 are be similarly corrected by subtraction of the deaths under 1, included

in the number given in column 9.

from the quarterly lists furnished by the Registrar General, to fill in column 8 in accordance with the rule in the next paragraph below. The Registrar-General either directly or through the County Medical Officer of Health. will supply the Medical Officer of Health with the particulars of deaths to be entered in Column 9, and all such deaths must be included in this column, unless an error is defected and its correction has been accepted by the Registrar-General. For column 4 the Registrar-General will furnish to the Medical Officer of Health a statement of the number of births needing to be x The Medical Officer of Health will be able from the returns made to him by the local Registrar of Deaths, as weil as added to or substracted from the total by the local Registrar.

K. Transferrable Deaths "are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, e.g., casuals, must not be included in columns 8 or 9, except in certain instances under 3 (b) below. The Medical Officer of Health will state in column 8 the number of tansferable deaths of "non-residents" which are to be deducted, and will state in column 9 the number of deaths of "residents" registered outside the district which are to be added in calculating the net.

death-rate of his district.

The following special cases arise as to transferrable deaths:—

(1) Persons dying in institutions for the sick or infirm, such as bospitals, lunatic asytums, workhouses, and nursing homes (but not almhouses) must be regarded as a special cases arise as to transferrable deaths:—
(2) Persons dying in institution had a fixed or usual residence at the time of admission, the death is not transferrable. If the patient has been directly transferred from one such institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.
(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be reterred to the district of the green to be referred (a) to the district of residence, under the general rule; (b) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; or the district where the body.

was found.
Total population at all ages, 30,626; number of inhabited houses, 5,819; average number of persons per house, 5.3; at census, 1911. Area of district in acres (land and inland water) 5609.

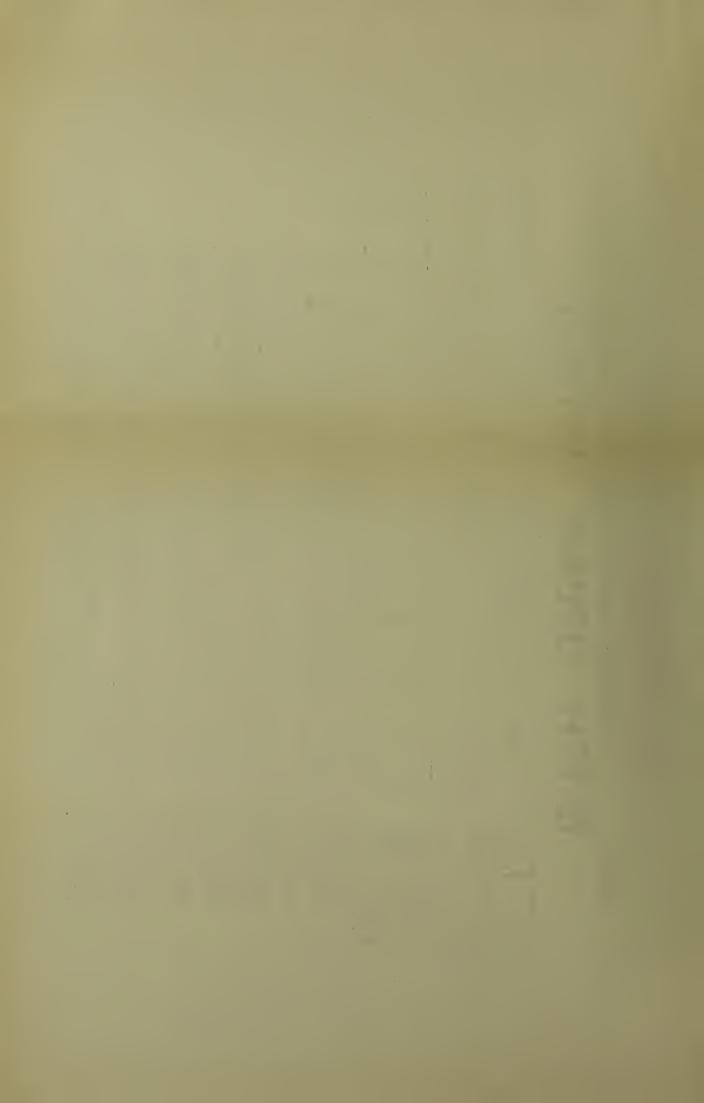


Table II.—Cases of Infectious Disease notified during the year 1913 in

URBAN DISTRICT. BLYTH

		Numi	BER C	F CA	SES .	Notii	FIED.		Тотаі	L CASE g. Pari	S NOT	FIED Ward)	of the	H LOCA Distric	ALITY.	pe
			A	At Ag	es †-	-Yea	rs.		1	2	3	4	5	6	7	removed ital.
Notifiable Disease	At all Ages.	Under 1.	l and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	North Ward.	South Ward.	East Ward.	West Ward.	New Delaval Ward.			Total cases rem to Hospital
Small-pox		••														
†Cholera (C) Plague (P) Diphtheria (including	•••	•••			•••	•••	• • • •	•••	•••	•••	•••	•••	• • • •	•••	•••	•••
Membranous croup)	34	7	20	3	4		l		5	2	8	8	11			$_2$
Erysipelas	43	i	4	9	13	16			9		19	8	7			1
Scarlet Fever	350	2	102	236	9	1			40	9	107	158	36			38
Typhus Fever																
Enteric Fever	22	1	5	9	5	2		•••	2	3	4	4	9			4
‡Relapsing Fever (R) Continued Fever (C)																
Puerperal Fever	•••		•••	•••		•••		•••		•••			•••	• • • •	• • •	•••
Cerebro-spinal Meningitis																
Pulmonary Tuberculosis	48		3	5	13	17	7	3	4	3	26	8	7			
Other forms of Tuberculosis	30	1	6	14	6	2	1		1	•••	15	9	5			
Totals	527	12	140	276	50	38	8	3	61	17	179	195	75			45

Notes .- State in space below the name and position within or without the district of the isolation hospitals, sanatoria other institutions to which the residents in the district, suffering from infectious disease, have usually been sent, and the name of the authority by whom the hospital is provided,

* This space may be used for record of other diseases the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

† Specify the disease by initial against the figure.
Port Sanitary Hospital within district provided by B.P.S.A. Isolation Hospital do. B.U.D.C.

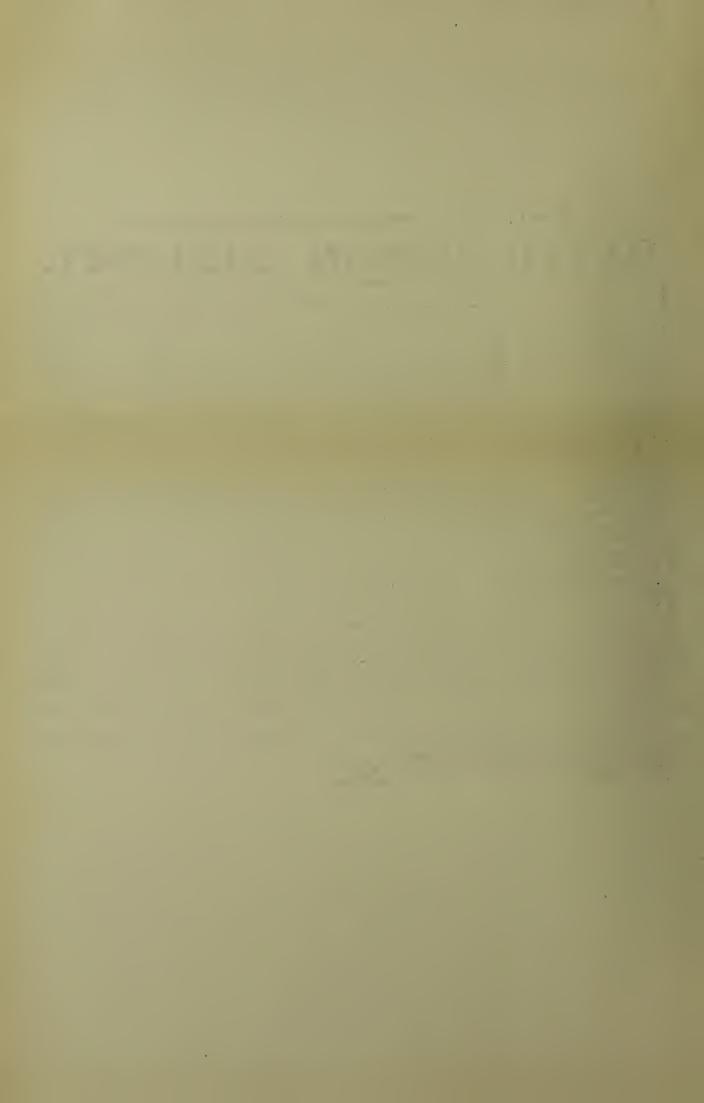


Table III.—Causes of, and Ages at Death during the Year 1913 in

BLYTh URBAN DISTRICT.

Causes of Death.		Nett Deaths at the subjoined Ages of "Residents" whether occurring within or without the District,								
1	All Ages.	Under 1 year	under 2 4	under 5 years	under	under	under 45 y'rs	under	up-	in Insti- tutions in the District,
All Certified (c)	479	110	40	20	28	21	65	76	119	'
All causes Certified (c) Uncertified	8	1	ì					3	3	
J Oncertined							<u> </u>			
Enteric Fever	7	l		1	2	1	2	1	l	
Small Pox										
Measles	15	8	4	1	2					1
Scarlet Fever	9		1	3	3	2				
Whooping Cough	10	3	4	2	1					
Diphtheria and Croup	4			2	2					10
Influenza	2						1		1	
Erysipelas										
Phthisis (Pulmonary Tuberculosis)	27			1		5	13	6	2	2
Tuberculosis Meningitis	3		l		2					$\overline{2}$
Other Tuberculosis Diseases	21	4	5	1	5	1	4	1		1
Cancer, malignant disease	20				•••		2	9	9	2
Rheumatic Fever	1				1	• • • •				
Meningitis	15	8	3	1	1		1	1		
Organic Heart Disease	55		1	•••.	1	3	7	22	21	1
Bronchitis	29	7	3	2	•••		1	5	11	1
Pneumonia (all forms)	30	3	5	1	1	5	8	3	4	
Other diseases of respiratory organs	4			•••				1	3	
Diarrhœa and Enteritis	25	14	9	1	•••			1		
Appendicitis and Typhlitis				••	•••		•••		•••	
Cirrhosis of Liver	2						•••	2		
Alcoholism			•••			•••	•••			
Nephritis & Brights Disease	11				1		3	4	3	3
Puerperal Fever					•••		•••		•••	
Other accidents & diseases of Pregnancy						- 1		1		
and Parturition	6	4		•••	•••		2		•••	
Congenital Debility and Malformation,										
including Premature Birth	43	43					::.			1
Violent Deaths, excluding Suicide	23		1	2	2	2	12	3	1	5
Suicide	1 1	:: 1				::		1		1
Other Defined Diseases	115	17	4	1	3	2	9	13	66	12
Diseases ill-defined or unknown	9	l l		I	1			6	1	1
Totals	487	111	41	20	28	21	65 4	79	122	3

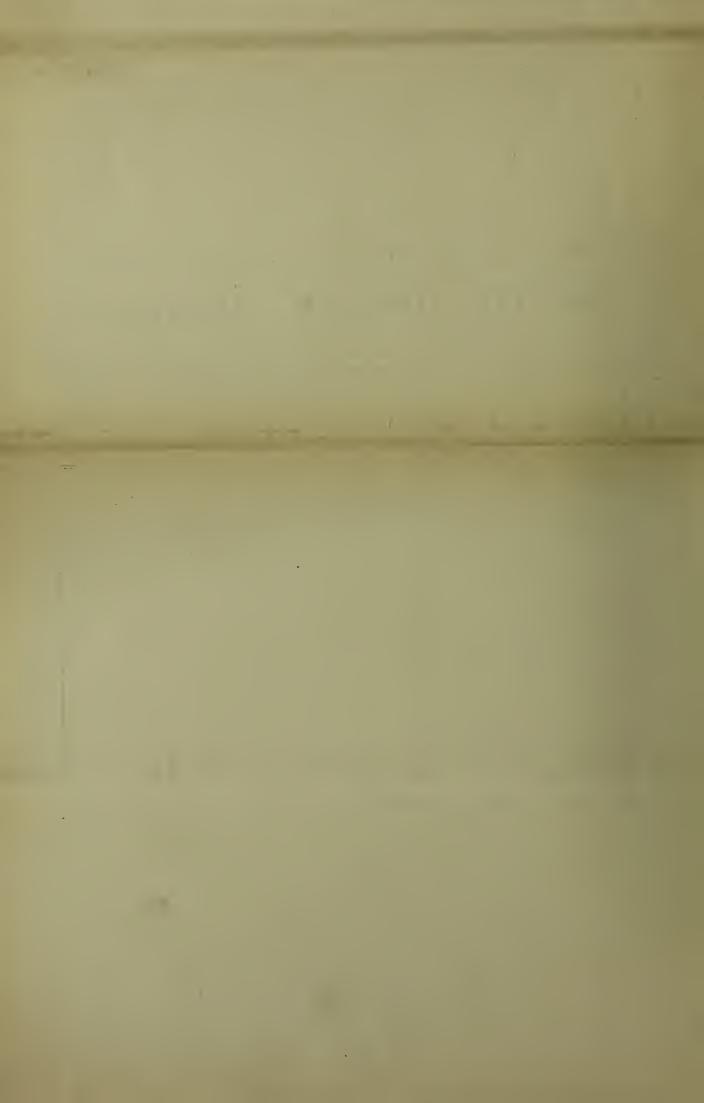


Table IV.—Infant Mortality during the year 1913 in

BLYTH URBAN DISTRICT.

Nett Deaths from stated Causes at various Ages under 1 year of age.

					100						
Cause of Death.		Under 1 week	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
All causes {Certified Uncertified	•••	32	4	2	3	41	18	13	32 1	16	110 1
Chicken-pox Chicken-pox Measles Scarlet Fever Whooping-Cough Diphtheria and Croup Erysipelas Tuberculous Meningitis Abdominal Tuberculosis Other Tuberculous Diseases Meningitis (not Tuberculous) Convulsions Laryngitis Bronchitis Pneumonia (all forms) { Diarrhœa Enteritis Gastritis Syphilis Rickets Suffocation overlying Injury at Birth Atelectasis Congenital Malformations (c) Premature Birth Atrophy, Debility and Marasmus										5	8 3 3 3
Other Causes Totals		32	 		3	41	18	13	$\frac{\overline{3}}{23}$	16	10

Nett Births in the year: Legitimate, 943; Illegitimate, 34. Nett Deaths in the year: Legitimate Infants, 106; Illegitimate Infants 5.



TABLE V.

1. Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

		Number of	
Premises.	Inspections,	Written Notices	Prosecutions
1	2	3	4
Factories (including Factory Laundries)	9	Nil.	Nil.
Workshops (including Workshop Laundries)	47	Nil.	Nil.
Workplaces (other than Outworkers' premises)	19	Nil.	Nil.
TOTAL	75	Nil.	Nil.

2. Defects found in Factories, Workshops and Workplaces.

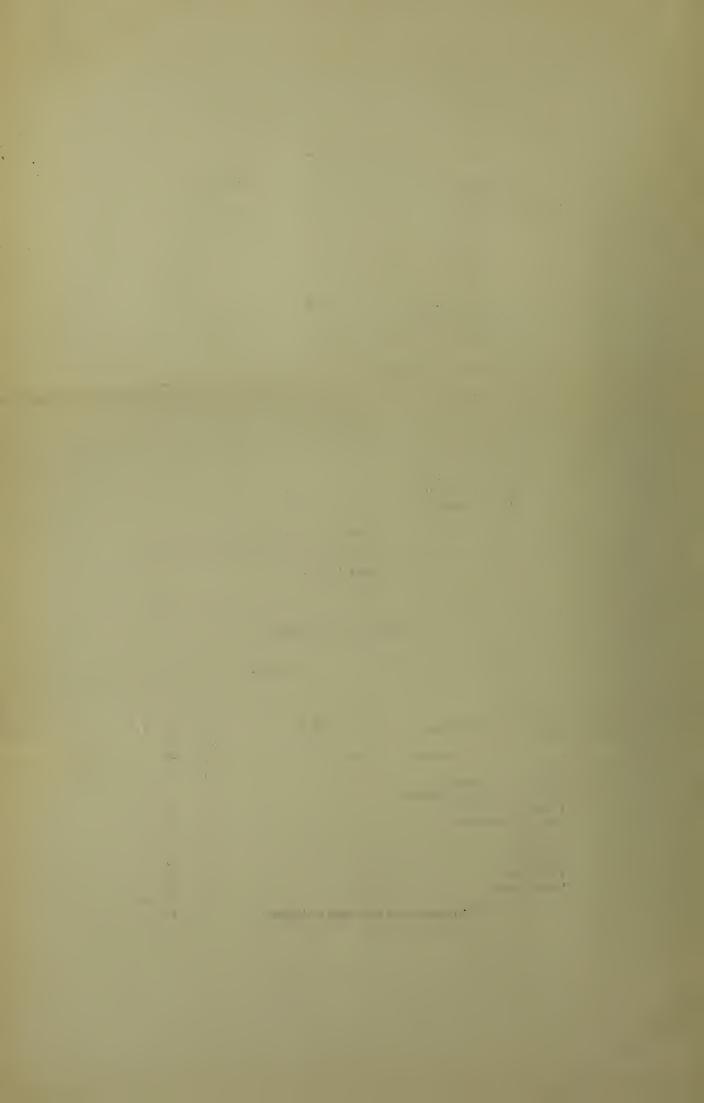
Want of Cleanliness			Number Found.	of Defects. Remedied.
Want of Ventilation	***	•••	1	1
Other Nuisances	•••	•••	7	7
Cinci Ivalianicas	•••	•••		
	Total	•••	9	9

3. Home Work.

Nil.

4. Registered Workshops.

1			2
Bakehouses	•		12
Dressmakers and Milliners	•••		13
	•••		
lailors, &c.	•••		10
Joiners and Cabinetmakers	•••	• • •	24
Printers	•••		5
Engineers and Smiths	•••		13
Mineral Water Manufacturers	•••		3
Plumbers			8
Boot and Shoemakers			12
Laundries			2
Painters	•••	1	$\bar{6}$
Saddlers	•••	•••	3
	•••	•••	_
Fish Curers	•••	• • • •	32
Other Trades	•••		5



LIST OF MEMBERS.

Members appointed by Blyth Council.

C. HUNTER, Esq., (Chairman).

W. T. B. FOX, Esq.

GEO. E. TYNEMOUTH, Esq.

A. R. TINWELL, Esq.

GEO. NEWSTEAD, Esq.

T. GALLACHER, Esq.

C. BARRON, Esq.

D. KELLY, Jun., Esq.

J. H. MARSHALL, Esq.

Members appointed by Bedlington Council.

GEO. BAKER, Esq.

THOS. DODDS, Esq.

JAS. ROBSON, Esq.

H. T. RUTHERFORD, Esq., Clerk to Authority

J. M. MACLACHLAN, M.B.C.M., (Glas.) Medical Officer.

Mr. J. J. HARRIS, Sanitary Inspector.



TO THE CHAIRMAN AND MEMBERS

River Blyth Port Sanitary Authority.

BLYTH, March 13th, 1914.

Gentlemen,—I have the honour to present to you my Annual Report for the year ending December 31st, 1913.

During the year, 3079 vessels other than fishing boats arrived in the port, and although a systematic and careful lookout was kept on all arrivals, no case of infectious disease came under my notice, the weekly return sent by the Local Government Board being most helpful in this matter.

The trade of the port remains as formerly, chiefly the export of coal, and the import of wood goods, which are mainly used for coal mining operations, nearly five million tons of coal, constituting a record for the port, being exported during the year, and thereby establishing Blyth as one of the leading coal exporting ports in the country. And when the contemplated alterations and increased facilities for handling coal are completed in the upper reaches of the harbour, we may anticipate a large increase in the shipment of coal and a corresponding increase in the trade of the port. During the year the imports of foodstuffs were practically nil, and in no case was it necessary to take action under The Public Health (Regulation of Food) Act, 1907.

In the early part of the year, The Port of Blyth Fishing Company ceased operations, and with the dismantling of their premises there are no immediate prospects of that industry being revived. As a compensation for the failure of that industry, the herring fishing in 1913 was the most successful in the annals of the trade in Blyth, and although the season only lasts for two or three months, the large number of 359 herring boats worked out of the port, making 4530 entries, and with 258 entries by drifters made a grand total of 4788 entries during the season.

WATER SUPPLY—The water boats were inspected and found satisfactory, but the majority of the vessels are supplied by the Blyth and Bedlington Urban District Authorities.

The water supply of all ships from infected and suspected ports were carefully attended to, and when necessary the tanks were emptied, cleaned, and a fresh supply taken.

The number of vessels from suspected ports was 2.



I made 19 special visits to vessels and found no trace of infectious disease.

ISOLATION HOSPITAL—During the year 45 cases of Infectious Disease were admitted to the Hospital, viz:—

Scarlet Fever	-	-	-	-	38
Typhoid Fever	-	-	-	-	4
Diphtheria -	-	~	-	-	2
Erysipelas -	-	•	-	-	I
					45

Of the 45 patients admitted, 41 recovered and were discharged cured, 2 died (one Typhoid and one Scarlet). 2 patients (Typhoid Fever) were inmates on 31st December, 1913.

All the cases, with the exception of 1 case (Scarlet Fever), were sent in by the officials of the Blyth Urban District Council.

I append the usual tables and express my indebtedness to the Harbour Commissioners, and their Secretary, Mr. Baldwin.

Copies of this report will be sent to the Local Government Board and the Northumberland County Council.

I am, Gentlemen,

Your obedient servant.

JAMES MORTON MacLACHLAN, M.B.C.M.

Medical Officer of Health.



HOSPITAL TABLE, 1913.

RESULT.	Cured do
DATE OF DISCHARGE.	March 8th, 1913 May 9th, May 1st, May 1st, May 1sth, Died 1sth Died Paril 28th July 24th August 30th July 24th August 23rd August 23rd August 23rd Cotober 2nd October 1st October 3th October 4th October 4th October 4th October 5th October 1st November 22nd December 22nd December 22nd December 22nd
By Whom Sent.	B.U.D.C. 660.00000000000000000000000000000000
DISEASE.	Scarlet Fever. do. do. do. do. do. Erysipelas Scarlet Fever do. do. do. do. do. do. do. do.
Residence.	62 Sidney Street, Blyth. 18 Barnard Street, Blyth. 29 Bowes Street, Blyth 29 Bowes Street, Blyth 29 Bolaval Terrace, Blyth 29 Boles Street, Blyth 29 Boles Blyth 29 Boles Blyth 29 Boles Blyth 29 Brick Row, Jubic House, 29, William Street, Blyth 4 Delaval Terrace, Blyth 4 Hall's Farm, 4 Delaval Terrace, Blyth 4 Hall's Farm, 7 " " 1 Double Row, Cowpen 3 Poplar Cottage, Corton, Suffolk 12 William Street, Blyth 10 Dixon's Buildings, Cowpen 11 Double Row, Cowpen 12 William Street, Blyth 20 Dixon's Buildings, Cowpen 20 Dixon's Buildings, Cowpen 38 High Street, Blyth 6 Tweedy Street, Blyth 7 Tate Street, Blyth 6 Fro Street, Blyth 18 West Row, Bebside Furnace 19 Tate Street, Blyth 10 Double Row, Isabella Pit 4 Back Phoenix Street, Newsham 10 Double Row, Isabella Pit 4 Back Phoenix Street, Blyth 10 Dixon's Blyth 10 Dixon's Blyth 10 Dixon's Blyth 10 Double Row, Isabella Pit 10 Dixon's Blyth 10 Dixon's Blyth 10 Dixon's Blyth 10 Double Row, Isabella Pit
AGE.	88 20 20 20 20 20 20 20 20 20 20
INITIALS.	M C C C C C C C C C C C C C C C C C C C
DATE.	Jan. 22nd April 2nd "" 22nd "" 26th "" 20th
No.	1 1 2 2 2 4 7 2 9 0 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2



TABLE OF SICKNESS.

Nature of Sickness.	Catarrh Catarrh Catarrh Injured head Fell down stokehold Catarrh Catarrh Catarrh Catarrh Catarrh Catarrh Catarrh Catarrh Catarrh Ulcerated Leg Fell overboard and drowned Fell overboard and drowned Catarrh Catarrh Retention of Urine Broken Leg Cystitis
Nationality.	Russian Danish German British Swedish Norwegian British French British
Rating of Patients.	Seaman Seaman Seaman Fireman Fireman Seaman Fireman
Arrived from.	Ghent Aarhuus Tyne Harlepool Stockholm Goole Drammen Sannesund London Scydistjord Ghent Hull Fishing ground Fishing ground Capatina Sandefjord Capatina Sandefjord Kishing ground Rotterdam Rotterdam Rotterdam Rotterdam Rotterdam Rotterdam Rotterdam Stockton Boulogne
Rig.	% % % % % % % % % % % % % % % % % % %
Name of Vessel.	Natalie Harrilsborg Frankford Southgarth Dora Vising Spring Spring St. Olaf Kirkoswald Ruth General Suworow Ester E. A.B, L. H. 137 Grimsby, H. 529 Adriatic Hidalgo Girl Ena, Lt. 3 Grimsby, H. 529 Adriatic La Norwege Contessa Adelma Contessa Adelma Lirinia Westoll Saint Ronald Darae Belorrosia Penistone Craigendoran
Date.	January 2nd February 6th "" 11th "" 17th April 18th July 18th July 11th "" 18th "" 18th "" 18th "" 18th "" 18th "" 28th



ANNUAL REPORT OF SANITARY INSPECTOR.

No. of British and Foreign Vessels arrived during the year :-

	Foreign		Coastwise		Total.
British Steam	264	• • • • • • • • • • • • • • • • • • • •	620		884
British Sailing	Nil		77		77
Foreign Steam	1252		728		1980
Foreign Sailing	18	******	36	• • • • • • • •	54
					2995
British Steam Trawlers and Dri					657
Foreign Steam Trawlers	•••••	• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · ·	• • • • • • • • • • •	17
					3669
Register Tonnage				2 207 891	

No. of Vessels found defective in structural arrangements and sanitary defects.

Vrssels.	Structural A	rrangements.	Sanitary	Defects.	mat-1	
V KSSELS.	Foreign.	Coastwise.	Foreign.	Coastwise.	Total.	
British Steam	15 Nil Nil Nil	13 Nil Nil Nil	24 Nil 69 4	35 4 44 4	87 4 113 8	
					212	

STRUCTURAL DEFECTS.

Overhead beams and deck not covered causing	damp	beds an	d fore	castle	-	-	1
Leakage in forecastles causing damp forecastles	3	-	•		•	-	4
Defective side ports in forecastles -	-	-	•		-	-	25
Defective stoves causing smoky forecastles	-	•	-	-		-	4
						•	34

SANITARY DEFECTS.

Forecastles not clean		•	-		-	-	-	-		91
Drinking water unfit fo	or use		-	-	-	-				2
Deck water closets not	clean		-	-	-	-	-			80
Bilges not clean	-		-	-	-	-		_		2
Fumigating of vessels	-	-	_	-	-	-				$\frac{-}{2}$
Decks not clean	-	•	•	•	-	-	-		-	1
										178
										110

The following table classifies the vessels arriving according to nationality—

			_		-2
Nationality.				1	No of Vessel
British	-	-	-	_	961
Norwegian		-	-	_	841
Danish	-	-	-	_	308
Swedish	-	-	-	_	316
German	-	-	-		282
Russian	-	_	_	_	155
Dutch	-	_	_	_	38
French	_	-	_	_	-
Belgian	_	_	_	_	37
Spanish		_	_		34
Greek	_	_	_	_	10
Austrian	_	_		_	6
Italian		_	-	-	5
ranan	_	•	-	-	2
					2995
					- 223



COAL AND COKE EXPORTS COASTWISE AND OVERSEA (BY VESSELS WHICH CLEARED DURING THE YEARS SHEWN).

DES	STINA	ATIO	N.			191	3		1912		D
					Large	Small	Coke	Total	Total	Increase	Decrease
CARGOES &	Part	CAR	GOES—		Tons	Tons	Tons	Tons	Tons	Tons	Tons
Coastwise	•••	•••	. • •	•••	309461	23128	55	332644	373769		41125
Russia	•••		•••	•••	950480	59465	2131	1012076	723121	288955	
Norway			••		325774	260222	2862	588858	594301		5443
Sweden	•••	•••	•••	•••	269878	112840	268	382986	343629	39357	
Denmark, Icel	and ar	ıd Fa	eroe Isl	ands	363619	52482	3410	419511	340029	79482	
Germany	•••		•••		426633	378892		805525	747451	58074	
Holland	•••		•••	•••	6357	5007		11364	28710		17346
Belgium	•••	•••	•••		23404	26919		50323	65983		15660
France	•••	•••	•••		170842	119222		290064	225712	64352	
Spain and Gib	ral ar	• • • •		•••	64538	6148	1017	71703	70404	1299	
Portugal	•••		•••	•••	2014			2014	17433		15419
Italy and Malt	:a				113282	3432	1076	117790	105495	12295	
Bulgaria, Aust	ria, Tı	ırkey	and G	reece	121846	7391	1780	131017	85640	45377	
Algeria, Egyp	t and .	Africa	an Port	s	49271	641	758	50670	43527	7143	
South America	a	•••	•••	•••	16318			16318	23279		6961
North America	a and '	West	Indies	•••	3733	31	92	3856	508	3348	
India	•••				15019	402		15421		15421	
					3232469	1056222	13449	4302140	3788991	513149	
Bunkers ship laden ar	ped by nd par	y tly la	den ves	ssels	333856	12038		345894	294002	51892	
BUN	KER	S ON	ILY.								
Trading Vesse	els	•••	•••	•••	48112	1933	1	50045	42003	8042	
Fishing Vesse	ls, Tu	gs, et	c	•••	32417	890		33307	63133		29826
River Craft (in	ncludi	ng lo	cal Tug	(s)	7104	3951		11055	9898	1157	
					3653958	1075034	13449	4742441	4198027	544414	



COAL SHIPMENT AT BLYTH.

(FROM STAITHS ONLY).

	PE	RIOD.			1913	1912	1911	Increase 1913 compare	Decrease d with 1912.
January					371383	339763	326072	31620	
February			•••	•••	393077	377397	341366	15680	
March	•••	•••	•••	•••	339269	10092	397954	329177	
April	•••	•••			415065	239348	331633	175717	
May		•••	•••		412732	438755	416383		26023
June	•••	•••			405537	388862	347389	16675	
First Ha	lf-yea	ar		•••	2337063	1794217	2160797	542846	
July			•••		427854	449187	384759		21333
August	•••	••:			385901	430475	340370		44574
September		•••	••		399748	406371	372703		6623
October		•••			425438	425218	389180	220	
November			•••	•••	371624	384759	389453		13135
December					384300	306703	387683	77597	
Second	Half-	year	•••		2394865	2402713	2264148		7848
Year		•••			4731928	4196930	4424945	534998	

PREVIOUS YEARS.

YEAR	Tons.	YEAR.	Tons.	YEAR.	Tons.
1883	150248	1894	. 2672418	1905	3755139
1884	394600	1895	2485159	1906	3882172
1885	533477	1896	2561745	1907	3946084
1886	576917	1897	2760519	1908	4037787
1887	615448	1898	3124391	1909	4047862
1888	1041037	1899	3314826	1910	4180171
1889	1381267	1900	3279051	1911	4424945
1890	1756055	1901	3219537	1912	4196930
1891	2092889	1902	3343376	19:3	4731928
1892	2180837	1903	3400617		
1893	2366943	1904	3536853		



NUMBER OF COAL LADEN VESSELS CLEARED OUTWARDS, Classified according to Quantities of Cargo Loaded.

CLASSIF	ICATION.		1913.			1912.			
Tons	Tons not ex- ceeding	Whole Cargo and Bunkers No.	Whole Cargo only No.	TOTAL.	Whole Cargo and Bunkers No.	Whole Cargo only No.	TOTAL No.	In- crease,	De- crease.
	500	132	98	230	129	95	224	6	
501	1000	423	28	451	405	29	434	17	
1001	1500	488	24	512	506	19	525		13
1501	2000	404	11	415	412	20	432		17
2001	2500	424	14	438	332	15	347	91	
2501	3000	254	6	260	185	7	192	68	
3001	3500	141	3	144	134	5	139	5	
3501	4000	42	1	43	34	1	35	8	
4001	4500	19		19	19		19		
4501	5000	25	4	29	15	2	17	12	
5001	5500	19		19	19		19		
5501	6000	18		18	6		6	12	
6001	6500	12		12	10		10	2	
6501	7000	2		2	4	1	5		3
7001	7500	5		5	1		1	4	
7501	8000	1		1	1		1		
8001	8500				3				
		2409	189	2598	2212	194	2406	192	
PART CA	RGO and	Bunkers		35			20	15	
PART CA	ARGO onl	y		20			11	9	
BUNKERS	s only—								
Tr	ading Ve	ssels	•••	242			231	11	
Fi	shing Ve	ssels	•••	1729			1716	13	
St	Strange Tugs		9			19		10	
M	ission Sh	ips	•••	2				2	
St	eam Yac	hts	•••	2				2	
				4637			4403	234	



IMPORTS OF GENERAL GOODS COASTWISE AND OVERSEA.

				1913.			1912.		
DESCRIPTION OF GOODS.		COASTWISE.	Russia.	Sweden.	DENMARK.	Totals.	Totals	Increase.	DECREASE.
Beer	Cases			110		110	150		40
Candles	21			2		2		2	
Coal	Tons	.75				75	235		160
Fish-White	٠,	3682				3682	5976		2294
Salted	,,,						60		60
Herrings Fresh	Crans.	50515				50515	14564	35951	
Do. Pickled	Barrels	766				766	564	202	
Salmon	fbs.	894				894		894	
Sardines & Anchovies	Cases	- 1		13		13		13	
Hay and Straw	Tons.			2		2		2	
Iron and Iron Goods									
Boilers & Machinery	17	6				6	197		191
Cable Chains	,,	32				32		32	
Steel Rails	,,	180				180	792		612
Scrap Iron	,,	102				102	4	98	
Preserves	Cases.			13	16	29	65		36
Salt	Tons.	2008				2008	110	1898	
Slates	,,	160				160	547		387
STONES									
Kerb and Setts	,,	382				382	410		28
Whinstone Chippings	,,	420				420	1189		769
Gravel	,,	257				257	413		156
Wood and Wood Goods									
Bobbins & Roundings	,,						4		4
Empty Casks	Number	65749			,	65749	2455	63294	
Mining Timber	Loads		21366	10313		31679	22193	9486	
Deals, Battens, Boards and other Timber		226	3899	4460		8585	8651		6 6
Doors	Number			510		510	420	70	
Oars	,,			39		39	68		29
Matches	Cases.			2		2		2	



EXPORTS OF GOODS other than Coal and Coke, Coastwise and Oversea.

			· ,			19	13.					1912.		
DESCRIPTION OF GOODS.		COASTWISE	Russia	Norway	SWEDEN	GERMANY	FRANCE	GREECE	Mexico	ITALY	TOTALS	TOTALS.	INCREASE	DECREASE
CLAY & CLAY GOODS											\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Firebricks & Fireclay	Tons			32			24	12		279	347	272	75	
Sanitary Pipes	"			5							5		5	
Bottles, empty	Cases				33						33		33	
Ferro Silico	Tons								-			3 0		30
Fish:														
Herrings, pickled	Barrels	240	29460			22376					52076	6182	45894	
White Fish	Tons											17		17
Grindstones	,,					15					15	6	9	
Graphite	, ,,			2							2		2	
Ice	1,	89									89	406		317
Iron & Steel Goods)			
Boilers & Machinery	,,			229	7				13					
fron Goods	"		1	5										
Pig	"			185							494	918		424
Plates) ,, "			48										
Pipes and Tubes	"			7							J			
LEAD—White	"				41						41	54		13
Motor Car	No.		1								1		1	
Lorries	,,	3									3		3	
Salt	Tons	236		25			:				261	92	169	
Sulphate of Ammonia	,,									3	3		3	
Tar	,,	1									1		1	
Wood & Wood Goods														
Empty Casks & Cases	"	9741			54						9795	3199	6596	
Furniture	,,						1				1		1	
Sleepers and Deals	,,			16							16		16	
New Ships	No.	British 4												
	R. Tons No.	6207		1870							5 8077	7479	<u>1</u> 598	
New Motor Boats	R. Tens	$\frac{1}{4}$									1		_1_	
											4		4	
					1 - 1						5 11			



ARRIVAL AND SAILING OF VESSELS (OTHER THAN FISHING VESSELS ENGAGED IN THE LOCAL FISH TRADE).

			ARRI	VALS.			SAIL	INGS.	
		В	RITISH.	F	OREIGN.	B:	RITISH.	F	OREIGN.
		No. Reg. Tons.		No.	Reg Tons.	No.	No Reg Tons.		Reg. Tons.
Steam Ships	•••	916	588950	2026	1596907	912	583654	2021	15,99112
Sailing Ships	•••	85	12065	52	13091	86	12251	52	13251
Total		1001	601015	2078	160999 >	998	595905	2073	1612363
						1			
Coastwise with carg	o	37	3753	2	648	397	133813	27	11490
Foreign with cargo	•••	3	4559	44	34221	414	403766	1824	1411693
Bunkers only	•••					118	38228	171	154526
Refuge only	•••					33	2417	9	2991
Repairs only	•••					12	12457	29	23829
Other purposes						24	5224	13	7834
Without cargo	••	961	592703	2032	1575129				
Total		1001	601015	2078	160998	998	595905	2073	1612363

ARRIVAL OF VESSELS.

Year.	No	of Vess	els	Т	otal Tonna	ge.		ige Tor f Ships		Precentage of British.	
	British.	Foreign	Total	British.	Foreign.	Total.	British	Fore- ign.	Both	Ships	Tonn- age
1886	433	579	1012	160423	168570	328993	370	291	325	43	49
1887	485	410	895	204690	152213	336903	422	322	376	54	67
1888	828	592	1420	384052	192142	576194	464	325	406	58	67
1889	1102	587	1689	525329	223719	749048	477	381	443	65	70
1890	1061	790	1851	61881 6	330496	949312	583	418	513	57	65
1891	1146	865	2011	705375	409928	1115303	616	474	555	57	63
1892	1242	1005	2247	743203	442900	1186103	599	441	528	55	63
1893	1229	1056	2285	805945	454610	1260555	656	431	552	54	64
1894	1233	1132	2365	843571	518444	1362015	684	658	576	52	62
1895	1086	973	2059	805947	470715	1276662	742	.484	620	53	63
1896	1049	1068	2117	757454	534188	1291642	722	500	610	50	59
1897	1046	1196	2242	732253	645925	1378178	700	540	615	47	53
1898	1106	1144	2250	872756	678896	1551652	789	594	690	49	56
1899	1039	1374	2413	727790	873065	1600855	700	635	663	43	46
1900	1149	1364	2513	771940	865388	1637328	672	634	652	46	47
1901	1125	1589	2714	779930	893670	1673600	693	562	617	41	47
1902	1036	1617	2653	712834	1004223	1715057	688	621	647	39	42
1903	971	1702	2673	632705	1144799	1777504	652	673	665	36	36
1904	1031	1878	2909	652385	1200173	1852558	633	639	637	35	35
1905	1082	2006	3088	678744	1308941	1987685	627	653	644	35	34
1906	1030	1876	2906	647523	1307297	1954820	629	697	673	35	33
1907	804	1918	2722	564799	1421643	1986442	702	741	730	30	28
1908	1012	2081	3093	5 18656	1487162	2005818	513	715	649	33	26
1909	803	2083	2886	544807	1471559	2016366	678	706	699	28	27
1910	873	2074	2947	542774	1508959	2051733	642	728	696	30	26
1911	1120	2052	3172	629410	1538527	2167937	562	750	683	35	29
1912	1108	1921	3029	560756	1447967	2008723	506	753	663	36	27
1913	1001	2077	3079	601015	1609998	2211013	546	775	718	36	27

